

a control-signal distributor configured to communicate a plurality of control signals from any of said system units to others of said system units for affecting the operation of all of said system units in response to conditions occurring in said any system unit;  
a domain configurator coupled to electronically partition said plurality of system units into one or more software-configurable hardware domains independently of any physical reconnection of said plurality of system units, wherein each of said one or more software-configurable hardware domains includes an arbitrary subset of said plurality of system units; and  
a domain filter coupled to each of said plurality of system units and configured to electronically inhibit at least some of said control signals originating in system units belonging to a given one of said hardware domains from affecting system units not belonging to said given one of said hardware domains, wherein said domain filter is further coupled to inhibit transactions originating in system units belonging to said given one of said hardware domains from being received in said system units not belonging to said given one of said hardware domains.

58. (New) The computer system according to claim 57, wherein said domain filter includes:

a connection for identifying which of said plurality of system units has generated a current address in said global address router;  
a domain-mask register corresponding to each of said plurality of system units configured to specify to which of said hardware domains each of said plurality of system units belongs; and  
gating logic responsive to said connection and to said domain-mask register and configured to decouple a system unit having generated said current

address and belonging to a particular hardware domain from system units not belonging to said particular hardware domain.

59. (New) The computer system according to claim 58, wherein each of said plurality of system units may include a portion of said domain filter.

60. (New) The computer system according to claim 59, wherein said domain filter is further configured to group system units of one or more of said plurality of hardware domains into a cluster, wherein said system units of said one or more domains belonging to a given cluster share a range of addresses within a system memory space.

61. (New) The computer system according to claim 60, wherein said domain filter further comprising:

a plurality of cluster registers each identifying to which cluster each of said plurality of system units belongs, wherein said plurality of cluster registers is responsive to a current one of said transactions;

a second connection for transmitting a valid-transaction signal to each of said plurality of system units belonging to a given cluster for any of said transactions originating from one of said plurality of system units belonging to said given cluster.

62. (New) The computer system according to claim 60, wherein said domain filter further includes a shared-address register indicative of said range of addresses being shared among said system units of said one or more domains belonging to said given cluster.

63. (New) A method of partitioning a computer system having a plurality of system units into one or more independent hardware domains, said method comprising:

receiving specification data defining a first subset of said plurality of system units for inclusion within a first hardware domain;  
loading said specification data into a domain filter and causing each system unit belonging to said first subset of said plurality of system units to be responsive to a first set of control signals, and to cause system units not belonging to said first subset of said plurality of system units to be unresponsive to said first set of control signals; and  
in response to said loading said specification data into said domain filter causing each system unit belonging to said first subset of said plurality of system units to be responsive to addresses originating from said system units belonging to said first subset of said plurality of system units, and causing each system unit belonging to said first subset of said plurality of system units to be unresponsive to addresses originating from said system units not belonging to said first subset of said plurality of system units.

64. (New) The method according to claim 63 further comprising:

identifying which of said plurality of system units has generated a current address;  
specifying using a domain-mask register to which of said hardware domains each of said plurality of system units belongs;  
decoupling a system unit having generated said current address and belonging to a particular hardware domain from system units not belonging to said particular hardware domain.

65. (New) The method according to claim 63 further comprising grouping system units of one or more of said plurality of hardware domains into a cluster, wherein said system units of said one or more domains belonging to a given cluster share a range of addresses within a system memory space.

66. (New) The method according to claim 63 further comprising:

identifying to which cluster each of said plurality of system units belongs using a plurality of cluster registers, wherein said plurality of cluster registers is responsive to a current one of said transactions; and  
transmitting a valid-transaction signal to each of said plurality of system units belonging to a given cluster for any of said transactions originating from one of said plurality of system units belonging to said given cluster.

67. (New) The method according to claim 63 further comprising indicating said range of addresses being shared among said system units of said one or more domains belonging to said given cluster.